Special Issue

DNA Damage Response for Targeted Cancer Therapy: Molecular Basis and Mechanisms Pathways

Message from the Guest Editor

DNA damage response (DDR) is a pivotal system for maintaining DNA integrity and is a safeguard for the correct transfer of genetic information between generations. The components of the system leading to the recognition, signaling, and repair of DNA damage have been largely understood over the last few decades. Currently, the focus is primarily on using this knowledge in clinical practice to develop therapeutic strategies. The inter-individual variability of the effectiveness of the DDR system contributes to the development of cancers, modulates individual response to cancer therapies, and is a target in modern personalized therapeutic strategies. This Special Issue aims to introduce to the readers the state of the art of the DDR system in cancer treatment and to address possible directions for developing new therapeutic strategies. We are looking for original articles as well as reviews on therapeutic strategies targeting the DDR system. Papers that report research on predictive factors and modern gene editing methods focused on modulating the efficacy of DDR system are also welcome. I look forward to receiving your contributions.

Guest Editor

Dr. Renata Krupa

Department of Molecular Genetics, Faculty of Biology and Environmental Protection, University of Lodz, 90-236 Lodz, Poland

Deadline for manuscript submissions

31 August 2025



Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8 CiteScore 9.2 Indexed in PubMed



mdpi.com/si/230667

Biomolecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomolecules@mdpi.com

mdpi.com/journal/ biomolecules





Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8 CiteScore 9.2 Indexed in PubMed



About the Journal

Message from the Editorial Board

Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in Biomolecules so far. We would be delighted to welcome you as one of our authors.

Editors-in-Chief

Prof. Dr. Peter E. Nielsen

Department of Cellular and Molecular Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Blegdamsvej 3C, DK-2200 Copenhagen, Denmark

Prof. Dr. Lukasz Kurgan

Department of Computer Science, Virginia Commonwealth University, Richmond, VA 23284, USA

Author Benefits

Open Access

 free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Biochemistry)

